

CONFERENCE NEWS

STIs at the millennium. Past, present, and future. Report on the conference held 3–7 May 2000, Baltimore, Maryland, USA

To mark the millennium year, the Medical Society for Venereal Diseases (MSSVD) annual conference was held jointly with the American Sexually Transmitted Diseases Association (ASTDA). The MSSVD was founded in 1922 and the ASTDA began in 1934 as the American Neisserian Medical Society. This is the first time these two august scientific societies have held a joint meeting in their combined 144 years, so it was a unique occasion and promised to be a very special one—we were not disappointed (slides and audio from all the plenary sessions will be webcast at www.hopkins-aids.edu/sti). Over 630 delegates, predominantly from the United States and the United Kingdom, attended the conference at the Omni Harbor Hotel, Baltimore, making this the largest Spring Meeting the MSSVD has ever been involved in. The city was a fitting venue for such a conference, having had a major role in the American scientific and public health responses to STDs. More recently, in 1998 Baltimore became the syphilis capital of the United States—having 30 times the national average!

The main theme of “STIs past, present and future” was woven throughout the programme. Although the main conference began on Wednesday evening, there were two satellite symposia held during the day. “*Treponema pallidum*—current epidemiology and molecular biology,” honoured the near centennial of Dr Thomas B Turner. Lectures covered the current epidemiology of syphilis and the remarkable advances of the past decade or so in understanding the molecular biology and pathogenesis of *T. pallidum*.

In the afternoon “Diagnostics in the molecular millennium” looked at how the new diagnostic techniques can be used to improve screening and treatment. Dr Deborah Cohen looked at the use of urine LCR testing for gonorrhoea and chlamydia screening of asymptomatic populations in clinical and non-clinical settings and particularly to screen adolescents in schools/colleges. Dr Brookes Jackson from Johns Hopkins University, Baltimore, described the use of HIV therapy monitoring and drug resistance testing and concluded that the use of viral load testing is useful in predicting disease progression, clinical response to treatment, and risks of perinatal and sexual transmission. Dr Angelika Stary, Centre for Infectious Diseases, Vienna, reviewed the use of new specimen types; Dr Jeanne Jordan, Magee Women’s Research Institute Philadelphia, reviewed the development of homogeneous fluorescent detection chemistry which gives simultaneous amplification and detection, higher throughput and more automation, reduction in contamination possibilities, and flexibility of both quantitative and qualitative readings.

Wednesday evening saw the official opening of the conference with a cheese and wine

reception. Delegates were welcomed by Dr Julius Schacter, Professor, University of California San Francisco and ASTDA President, and Dr George Kinghorn, President of the MSSVD. The opening addresses welcomed delegates and set the scene. The evening saw the start of lively exchanges of information, opinions, and debates between colleagues from all over the world although the combination of hospitality and jet lag saw the retreat of most of the UK delegates earlier than would normally be the case!

The first full day of the conference was taken up by some excellent plenary lectures covering the epidemiology of sexually transmitted infections (STIs) across both sides of the Atlantic. Professor Mike Adler described these trends in the United Kingdom and Europe and the worrying increase in teenage pregnancies. He also commented on the cost pressures currently facing genitourinary medicine clinics in the United Kingdom to adequately fund the increasing demand for STI services as well as having to pay for combination antiretroviral therapy.

Dr Judith Wasserheit responded with a view from the United States, describing the disturbing impact of combination antiretroviral therapy on sexual behaviour in homosexual men and the related increases in reports of early syphilis, chlamydial infection, and anorectal gonorrhoea. Between a quarter and a half of these men were co-infected with HIV. It was also clear that despite the strength of the US economy, there were cost pressures for downsizing public STI clinics.

This was followed by plenaries on new tests for bacterial STIs and what is new in HIV prevention interventions. Technological developments and their application in improved diagnostics were themes covered by Professor Taylor-Robinson on chlamydial infection and Dr Stephen Morse on bacterial STI. It was clear that the future lay in diagnostic tests based on nucleic acid amplification. Multiplex PCR kits are currently in development for genital ulcer disease (testing for HSV, *T. pallidum*, *H. ducreyi*) and for a little under \$60 000 you can now buy a briefcase sized, rugged PCR thermal cycler complete with a satellite phone! Perfect for those thinking of setting up an outreach clinic in the Arctic circle.

Of particular interest in this morning of excellent plenary presentations was a paper given by Dr Sevgi Aral, who looked at how we need to move away from concentrating on numbers of partners and focus instead on sexual mixing and sexual networks. Moreover, the duration of time from one partner to the next is also important in terms of the transmission and acquisition of an STI. Dr Aral then proposed what could be considered “safe gaps” based on the limits of infectiousness for an STI—for example, 6 months for gonorrhoea in the absence of control programmes. Dr Aral also reported that a key figure in American public life was not alone in his thoughts on oral sex—60% of American students surveyed did not consider oral sex as “having sex”!

The late morning plenary focused on HIV/STI interactions and the usefulness (or otherwise) of mass STI interventions and the likely impact on preventing HIV infection. The two principal investigators of recent intervention studies conducted in Africa, David Mabey (Mwanza, syndromic treatment, intervention effective) and Ron Gray (Rakai, mass treatments, intervention ineffective), presented their findings and tried to

account for the differences in their conclusions. It was suggested that in populations with a mature epidemic, with a larger proportion of people infected and carrying a higher (viral load) burden of HIV (as in Rakai), STI interventions were less likely to be effective. This rather depressing conclusion will clearly fuel debate on sexual health priorities in developing countries with already high levels of HIV infection.

The afternoon plenary dealt with contraception and genital infections. Of note, Dr Sharon Hillier gave a superb overview of bacterial vaginosis (BV) and the current controversies surrounding this fascinating condition. She explored the interaction of the spermicide, nonoxonyl-9 (N-9), on hydrogen peroxide producing lactobacilli, commenting that N-9 may have opposing effects. While N-9 could be lethal to lactobacilli, it was also capable of stimulating myeloperoxidase activity in white cells, which could enhance the killing activity of lactobacilli against anaerobes and *Gardnerella*. She concluded, therefore, that spermicides neither increased nor reduced the risk of BV, although methods or treatments aimed at stimulating lactobacilli killing activity could be useful in controlling recurrent BV.

In the subsequent oral presentations, Dr Gorbach gave a fascinating talk on concurrent sexual partnerships. She described a study identifying patterns of concurrency in STD patients and also in adults in community samples. STDs can be spread very effectively in concurrent relationships and it is suggested that control measures could be improved if concurrent relationships were targeted. The study revealed six types of concurrency and concurrent relationships were found in all the groups studied. Different concurrent relationships have different risks for STIs and differing levels of condom use. Men particularly reported using concurrent relationships to avoid being “partnerless” at the end of disintegrating relationships. Women, especially those in the STD group, reported reactive concurrency where a new partner was taken in reaction to the infidelity of their male partner rather than to end the relationship. Concurrency during physical separation and while in transition between partners was seen as socially acceptable forms of non-monogamy. Dr G Hughes from the UK PHLS presented a look at characteristics of those who repeatedly acquire STIs in a cohort study across three urban clinics in the United Kingdom and showed that teenage girls, homosexual men, and black Caribbeans repeatedly utilised services and re-presented with acute STIs. The day provoked much debate which was continued over a crab feast where delegates sampled the local delicacy of steamed Maryland blue crabs. Despite the extensive experience of many delegates in the clinical management of the smaller genital variety, there was a clear evidence base in favour of using hammers and knives to attack the edible variety.

Friday began early with another spirited breakfast debate: “This house believes that controlling genital HSV will reduce the spread of HIV infection.” In favour of the motion was Ron Ballard from Johannesburg and against was Lawrence Stanberry from Cincinnati. The motion was just carried.

Friday morning saw the conference turn its attention to viral STIs. Dr Lawrence Corey showed data based on a meta-analysis of 22 studies looking at the interaction of HSV-2 infection and the risk of HIV acquisition, and

concluded that there was a 3.4-fold increased risk of HIV acquisition with HSV-2 infection. The next speaker, Dr Frances Cowan, pursued measures aimed at reducing this risk. She felt that while it was not practical (or financially plausible) to pursue a programme of mass suppressive therapy, it could be cost effective if core groups, such as sex workers, at greatest risk of HIV infection could be targeted.

Dr Janet Wilson brought the delegates safely down to earth with an excellent review of current treatments for genital warts. This was followed by a fascinating account of HPV associated head and neck cancers by Dr Keerti Shah, Harvard Medical School. He showed that over 60% of oropharyngeal cancers were HPV DNA positive, and that women with a history of lower genital tract cancer were at high risk of subsequent oropharyngeal cancer.

The morning ended with a tribute to Dr Thomas B Turner on his 98th birthday who was instrumental in early efforts in the 1930s to combat syphilis and other public health problems. In his introduction the session chairman Dr James Bingham reminded the audience of the personal links that Dr Turner had had with many eminent names in British venereology.

The afternoon saw further high quality oral presentations on HPV, herpes, STD epidemiology, operations research, and the internet. Kevin Miles, research nurse, from University College, London, presented a randomised control study on nurse led clinics in a central London clinic. His results suggest that these clinics can provide sexual health care for female patients that is equal to, and in some ways better and more acceptable than, that provided by junior doctors, and complements the existing doctor led service. As expected, this presentation provoked the liveliest debate of the conference among the UK delegates and Mr Miles was led away from the podium with an armed escort. Later that afternoon, Dr Klausener described an outbreak of early syphilis among homosexual men using an

internet chat room. These virtual chat rooms provide users with live access to other users who share a common interest—in this instance, opportunities to meet and have sex with like minded individuals. He described the efforts to initiate partner notification using the same venue, as many contacts were only known by their web aliases—this raised issues of the right to privacy and the conflicting needs of maintaining public health. A survey conducted by Dr Klausener showed that 30% of homosexual men in San Francisco had met a partner on the internet in the past year and HIV positive men who met partners on the internet had more partners and were less likely to use condoms.

The session finally closed with a “paper” delivered by Dr Colm O’Mahony, bemoaning the paucity of clear, balanced information on the web for patients with Behçet’s disease. At least that was what the abstract stated. Instead, delegates were given a delightful tour of the original Baltimore in Ireland, and an amusing account of email correspondence and computer virus transmission. For his efforts, Dr O’Mahoney had the dubious distinction of winning the prize for “The scientific paper with the least scientific content.”

Saturday began with an interesting historical comparison and contrast between syphilis and HIV by Dr Virginia Berridge, London School of Hygiene and Tropical Medicine. Dr John Bartlett, Johns Hopkins University, and Professor Ian Weller, University College London, gave clear and concise overviews on “Managing HIV in the year 2000.” Delegates were then given the treat of hearing Dr King K Holmes, University of Washington Seattle, give an amusing and thought provoking talk on the future. He suggested that we needed to involve young people and move out of clinics into the local communities we served. He also urged delegates to move beyond numbers of sexual partners and consider concurrency, “gap,” and individual sexual trajectories. Finally, he suggested various “millennium mysteries” for research to solve, such as the causes of NGU, mucopurulent cervicitis,

PID, and what part STDs played in prostate cancer, polycystic ovary syndrome, endometriosis, and vulvar vestibulitis.

This stimulating, enjoyable conference ended with a formal banquet at the Port Discovery Museum which gave delegates the opportunity to relax and carry on many of the lively discussions and exchanges of information that had taken place over the past few days. The only criticism of the conference was that the programme was extremely packed and so it was difficult at times to take in all the information. In their closing speeches Drs Schacter and Kinghorn both emphatically stated that the success of the meeting had exceeded all expectations and that the two societies should meet again in a few years’ time, possibly on the other side of the “pond.” They also awarded the prizes for the best presentations to the following papers:

Best oral presentation (£300): “It takes a village: the need for concurrent sexual partnerships in Seattle, WA,” presented by PM Gorbach (San Diego) *et al.*

Best posters (£200 each): (1) “A randomised trial of a brief small-group behavioural intervention for ‘high risk’ gay men attending an STD clinic” J Imrie (London) *et al.*; (2) “Bacterial vaginosis and vaginal lactobacilli in women who have sex with women” JM Marrazzo (Pittsburgh) *et al.*; (3) “Accessibility to GU medicine clinics” E Foley (Southampton) *et al.*

Best presentation on genital herpes (joint winners, £300 each): (1) “Using predictive probability to devise an algorithm for HSV antibody testing” A Copas (London) *et al.*; (2) “Does the extract of the plant echinacea pupurea influence the clinical course of recurrent genital herpes?” B Vonall (London) *et al.*

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